

REMARKS/ARGUMENTS

Amendment to the Specification

The typographical error in the equation for V_h has been updated in both the text, pages 4 and 7 and in Claim 4, to correctly reflect the value of V_h based on the circuit shown in Fig. 2.

In addition, Fig. 2 shows circuits commonly called "differential pairs" (e.g. Q1 and Q2 and Iw2) in introductory college-level electronics textbooks such as Sedra and Smith's Microelectronics: Circuits. The common nomenclature is included to simplify the description in Claims 4 and 5.

Claim Objections

Claims 4 and 10 were objected to because of informalities.

The typographical error in the formula provided for V_h has been updated in both the text, p. 4 and in Claim 4. The amended equation for V_h has the proper units, current multiplied by resistance providing the units of voltage, and the equation correctly reflects the topology of the circuit shown in Fig. 2, which has a parallel combination of the head resistance and the matched impedance control circuits.

Claims 10 – 15 are cancelled and the reason for the objection no longer applies.

Claims Rejections 35 USC § 112

Claims 4 and 10-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 (currently amended) recites "is" instead of "may be" as per the Examiner's request.

Claims 10 – 15 are cancelled and the reason for the rejection no longer applies.

Claims Rejections 35 USC § 102

Claims 4-5 and 10-11 were rejected under 35 U.S.C. 102(e) as being anticipated by Ngo (U.S. 7,006,313 B2).

Claims 10 – 11 are cancelled and the reason for rejection no longer applies.

Claims 4 – 5 (currently amended) are not anticipated by Ngo because Claims 4 – 5 recite "two differential pair circuits, each coupled between the two opposing terminals". Ngo's Figure 1 has Q0 and Q1, only, but does not have two differential pair circuits. Therefore, Claims 4 – 5 should be patentable over Ngo.

Claims 4-5 and 10-11 were rejected under 35 U.S.C. 102(e) as being anticipated by Venca et al. (U.S. 6,970,316 B2). The Examiner referred to Fig. 3.

Claims 10 – 11 are cancelled and the reason for rejection no longer applies.

Claims 4 – 5 (currently amended) are not anticipated by Venca due to various differences. For example, Claims 4 – 5 recite “two differential pair circuits, each coupled between the two opposing terminals”. Instead, Venca’s Figure 3 has several pairs of circuits with transistors 111, 116, 120, through 114, 119, 123, which are not differential pairs. Therefore, Claims 4 – 5 should be patentable over Venca.

New Claims

New Claim 16 which recites “two differential pair circuits, each coupled between the two opposing terminals” is not anticipated by Ngo or Venca and should be patentable over these references.

Allowable Subject Matter

Applicants thank the Examiner for allowing various claims and his thorough summary.

Respectful request is made for reconsideration of the application, as amended, and for an issuance of a Notice of Allowance.

Respectfully submitted,

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